General Information	Academic'Year 2020/2021
Academic subject	Methodology for Flora and Vegetation surveys I.C.
Degree course	Master's degree in Natural and Environmental Science
ECTS credits	2
Compulsory attendance	Strongly recommended
Language	Italian

Subject teacher	Name Surname	Mail address
	Luigi Forte	luigi.forte@uniba.it

ECTS credits details	Area	SSD	CFU/ETCS
	05	BIO/03	2

Class schedule	
Period	I semester
Year	I
Type of class	Lecture and workshop

Time management	
Hours	50
In-class study hours	19,5
Out-of-class study hours	30,5

Academic calendar	
Class begins	October 2020
Class ends	January 2021

Syllabus	
Prerequisites/requirements	Basic knowledge of Ecology and Geobotany
Expected learning outcomes	● *Knowledge and understanding on:* The student will have to know the fundamentals for the study of Flora and Vegetation and understand the methods of sampling and processing floristic and vegetation data. This knowledge, as well as the ability in comprehension, will be acquired through classroom lectures and field trips. ● *Applying knowledge and understanding on:* The student will have to develop the ability to take a census and carry out a floristic analysis of a territory. The ability to analyze and classify the different kinds of vegetation of a given area, to set up and interpret phytosociological tables. This ability will be acquired through classroom lectures and field trips. ● *Making informed judgments and choices:* The student will have to develop the ability to choose the most appropriate techniques for the census and monitoring of flora and vegetation. This ability will be acquired mainly through field trips. ● *Communicating knowledge and understanding* The student will have to acquire the lexicon and the terminology peculiar to the discipline, which can give him/her the opportunity to work in teams involved in environmental monitoring and nature conservation, as well as the ability to comprehend possible in-depth analysis through specialized bibliography. This skill will be acquired through classroom lectures and during moments of interaction teacher-student which will be stimulated by the teacher.

	• *Capacities to continue learning* The student will have to acquire the ability to read with critical sensibility the evolution of the discipline, by consulting texts and data bases. This ability will be acquired through the consultation of data bases and the webography that will be suggested by the teacher during the course.
Contents	Principles and methods of study of Flora: references to plant life forms and growth forms and to the main chorotypes of Italian and European flora; methods of sampling and collecting field data; identification of species and related problems; herbarium set-up (drying, mounting, conservation) and role of institutional Herbaria; floristic elaborations (floristic list, numerosity, ecological spectrum, biological spectrum, chorological spectrum, individuation of species of particular phytogeographic and conservation value - endangered species and related status -, floristic cartography and isoporic maps). Principles and methods of study of Vegetation: extensive and intensive methods; references to discontinuity and continuity approaches; phytosociological method: theory and practice (elementary population, diagnostic role of species in plant communities, characteristic species, plant association, the superior units of phytosociological classification); phytosociological relevé (minimal area, abundance/dominance scale, sociability scale); processing and use of phytosociological relevé ("raw" table, classification and ordering techniques - distance/similarity algorithms, distance/similarity matrix, techniques of automatic hierarchical classification and dendrograms, structured table, representation of the structure of data in a small size space); phytosociological table; weighted biological and chorological spectra on the frequency and on the covering index; Ellenberg indices and ecograms. The contents of the field trips will deal about the subjects debated during the class lectures.

Course program	
Bibliography	Ubaldi D., 2012. Guida allo studio della flora e della vegetazione. Clueb, Bologna. Pignatti S., 1995. Ecologia vegetale. UTET, Torino.
Notes	The texts suggested are available for reference at the Library of the Plant Biology Section of the Department of Biology. During the course, electronic documents as well as course slides will be provided, though they must not be considered as lecture notes. The use of class notes is strongly recommended.
Teaching methods	Classroom lectures supported by multimedia tools and implementation application of techniques of active learning, by carrying out vegetation surveys. Moments of interaction teacher-student stimulated by the teacher during the classroom lectures.
Assessment methods	Oral exam is the main instrument for the assessment which, however, will be based upon the regularity in attending the course as well. For the final assessment, clarity in the presentation and a correct use of language will be considered too.
Evaluation criteria	• *Knowledge and under standing:* The student will have to demonstrate to know all the contents of the teaching and particularly will have to prove that he/she has acquired the basics about the methods and techniques for the sampling of flora and vegetation. He/she will have to prove to have fully understood the fundamentals of the numerical techniques of classification and organization aimed at the phytosociological interpretation of plant communities. The knowledge of these topics is necessary to pass the exam, while the mere acquisition of basics notions allows an assessment which will not exceed a middle level. • *Applying knowledge and understanding:* The student will have to be able to use the methods of floristic census and

	vegetation classification depending on the different territorial areas and on their own purposes. These skills are essentials to pass the exam. • *Autonomy of judgment*: The student will have to demonstrate the ability to choose the most appropriate techniques according to the level of the analysis. This skill allows to get a very positive assessment. • *Communicating knowledge and understanding:* The abilities to express concepts and formulate interpretations, with a correct use of language and clarity in exposition, making use of the scientific terminology learnt during the semester, will be greatly appreciated. These skills, together with the previous one, ensure a very positive assessment of the competence and performance of the student. • *Capacities to continue learning:* During the final examination, the student must show to have acquired critical abilities and that he/she is able to achieve new knowledge on his/her own. Possessing these abilities will contribute to a strongly positive assessment of the final exam.
Further information	